

REMARKS

Claim Rejections – 35 USC §103

The examiner rejected claims 1-3 under 35 USC §103(a) as unpatentable over U.S. Patent No. 5,631,787 to Huang et al. in view of U.S. Patent No. 5,526,203 to Mohajerani et al. The examiner asserts that Huang discloses a disk drive comprising a shroud 120, 122 in FIGs. 1-2 extending axially from the inner surface of the base into the head disk assembly chamber substantially enveloping the outer periphery of the disk, including at least part of the outer periphery coextensive with the actuator arm when the actuator arm is positioned adjacent the outer periphery of the disk, to provide radial shrouding of the disk. The examiner asserts that Huang discloses that the shroud could be a separate piece adhered to the inner surface of the base or made an integral part of the base (col. 6, lines 50-67; col 7., lines 1-12). However, the examiner concedes that Huang does not disclose that the shroud is part of the cover. The examiner asserts that it would have been obvious at the time the invention was made to modify the disk drive of Huang in view of Mohajerani to arrive at the disk drive recited in the claims. The applicant respectfully disagrees.

Although Mohajerani discloses a disk drive employing a cover having a shroud element 23a that extends downward into the head disk assembly chamber, Mohajerani does not disclose or suggest that the shroud element 23a envelop a periphery of the disk including at least part of the periphery coextensive with the actuator arm. In addition, Mohajerani discloses in FIG. 2 that the shroud element is formed from two pieces: a top piece 23a that extends downward from the cover, and a bottom piece 23b that extends upward from the base. Therefore, modifying Huang in view of Mohajerani would lead to a radial shroud that includes a piece extending upward from the base which presents the same manufacturing problem as Huang.

A shroud piece extending upward from the base (as taught by both Huang and Mohajerani) increases the disk drive manufacturing cost since the actuator arms and disks

would have to be installed into the disk drive as a unitary assembly. Referring to applicant's disclosure at page 2, lines 19-22, the preferred method for manufacturing a disk drive is to first install the disk 108 (FIG. 1), and then install the actuator arm assembly so that the actuator arms 110 fit into the gap 118 without damaging the heads 114. The actuator arms 110 are then rotated to position the heads 114 over the disks 108. If the shroud were to extend upward from the base (as taught by both Huang and Mohajerani), it would prevent installing the actuator arms as a separate assembly since the shroud piece extending upward from the base would obstruct the actuator arms from rotating into position over the disks. This is why Huang discloses the shroud as a separate element which is installed after rotating the actuator arms into position over the disks.

Similarly, the shroud (23a and 23b) disclosed by Mohajerani is not positioned in the gap associated with the actuator arms and therefore does not present a manufacturing impediment when installing the actuator arms. Merely moving the shroud pieces (23a and 23b) into the gap associated with the actuator arms will not overcome the manufacturing problem since the bottom shroud piece 23b would obstruct the actuator arms from rotating into position over the disks.

Mohajerani does not disclose any motivation for providing a shroud that has a piece extending downward from the cover into the gap associated with the actuator arms. The motivation of reducing manufacturing time as suggested by the examiner comes only from applicant's own disclosure which cannot be used under 35 USC §103. Therefore the examiner is employing improper hindsight reasoning by relying on a motivation that is disclosed only by the applicant's disclosure (reducing manufacturing time needed to install the actuator arms and associated radial shroud).

The rejection of the remaining claims should be withdrawn for the reasons set forth above.

CONCLUSION

In view of the foregoing remarks, the rejections under 35 USC §103 should be withdrawn. The teaching of Huang and Mohajerani to provide a shroud piece extending upward from the base of a disk drive would increase the cost and complexity of manufacturing the disk drive since the actuator arms and disks would have to be installed as a unitary assembly. Providing a shroud piece that extends from the cover into the gap associated with the actuator arms overcomes these drawbacks, but this modification is suggested only by applicant's own disclosure which cannot be used under 35 USC §103. The examiner is employing improper hindsight relying on a motivation taught by applicant's disclosure rather than a motivation taught by the prior art. The examiner is encouraged to contact the undersigned over the telephone in order to resolve any remaining issues that may prevent the immediate allowance of the present application.

Respectfully submitted,

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